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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/734,325	12/12/2003	Daniel J. Murray	03-1427/L13.12-0249	1374

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EXAMINER	
TRUONG, LOAN	
ART UNIT	**PAPER NUMBER**
2114	

DATE MAILED: 06/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/734,325	MURRAY ET AL.	
	Examiner	Art Unit	
	LOAN TRUONG	2114	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12/12/2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *12 December 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Hardin et al. (US 2002/0165999).

In regard to claim 1, Hardin et al. disclosed a process of supplying data concerning an occurrence of an interface event affecting a device to at least one reference model having at least one listener, comprising steps of:

operating a monitor to detect the occurrence of the interface event (*each pin state change will be forwarded to hardware event object and placed into FIFO, fig. 6, paragraph 0362 lines 4-6)*;

maintaining a list of listeners accessible to the monitor (*event multicaster objects and two listener software components, fig. 3, 302, 304, 306, paragraph 0298)*; and

supplying data from the monitor (*event multicaster objects, fig. 3, 302)* to the listeners on the list (*listener software components, fig. 3, 304, 306)* in response to the occurrence of the interface event for use by the respective reference model (*received an event notification of an event in which listener software has registered, paragraph 0298).*

In regard to claim 2, Hardin et al. disclosed the process of claim 1, further comprising: registering the listener with the monitor (*each listener software components include code to be executed upon receiving an event notification of event for which it has registered, fig. 3, 304, 306, paragraph 0298).*

In regard to claim 3, Hardin et al. disclosed the process of claim 1, wherein the listener is instantiated in the reference model, the process further comprising:

configuring the listener to like inherit a listener interface (*event can be sent by a single interface, paragraph 0295 lines 4)*,

transmitting a registration request to the monitor (*listener software components register to receive a particular event or events with the event multicaster objects, paragraph 0295)*, and

entering a pointer to the listener in the list in response to the request (*listener software component are reference to in the event multicaster object, fig. 3, 314, 316, paragraph 0298 lines 10-13).*

In regard to claim 4, Hardin et al. disclosed the process of claim 3, further comprising:

generating a first data structure by the monitor in response to the occurrence of an interface event (*properties of hardware event object can be set and retrieved via setter and getter methods, fig. 6, 610, 612, 614, paragraph 0358 lines 5-7)*, and generating a private data structure for the reference model based on the first data structure and an event handler (*FIFO, fig. 6, 616, paragraph 0360 lines 1-4).*

In regard to claim 5, Hardin et al. disclosed the process of claim 1, further comprising:

generating a first data structure by the monitor in response to the occurrence of an interface event (*properties of hardware event object can be set and retrieved via setter and getter methods, fig. 6, 610, 612, 614, paragraph 0358 lines 5-7)*, and generating a private data structure for the reference model based

on the first data structure and an event handler (*FIFO, fig. 6, 616, paragraph 0360 lines 1-4).*

In regard to claim 6, Hardin et al. disclosed the process of claim 1, wherein a plurality of monitors are operated for the occurrence of respective interface events (*each pin state change will be forwarded to hardware event object and placed into FIFO, fig. 6, paragraph 0362 lines 4-6)*, and the reference model is configured to perform procedures inherited from each monitor (*listener software component executed code for event for which it has registered, paragraph 0300 lines 8-14)*, whereby each monitor supplies data to the reference model concerning the respective interface event in a structure derived from the respective monitor (*event multicaster objects send event notification to an event in which the listener software component has registered, paragraph 0300)*, and the reference model interprets the data (*each listener software components includes code to be executed upon receiving an event notification, fig. 3, 304, 306, 318, 320, paragraph 0298 lines 19-22).*

In regard to claim 7, Hardin et al. disclosed thee process of claim 6, wherein a plurality of listeners are instantiated in the reference model, the process further comprising:

configuring the respective listener to like inherit the respective listener interface (*event can be sent by a single interface, paragraph 0295 lines 4)*,

transmitting a registration request to each monitor (*listener software components register to receive a particular event or events with the event multicaster objects, paragraph 0295)*, and

in each monitor, entering a pointer in a list accessible to the respective monitor (*listener software component are reference to in the event multicaster object, fig. 3, 314, 316, paragraph 0298 lines 10-13).*

In regard to claim 8, Hardin et al. disclosed the process of claim 1, wherein a plurality of reference models are each configured to perform procedures inherited from the monitor (*listener software*

component executed code for event for which it has registered, paragraph 0300 lines 8-14), whereby the monitor supplies data to the plurality of reference models concerning the interface event in a structure derived from the monitor (*event multicaster objects send event notification to an event in which the listener software component has registered, paragraph 0300)*, and each reference model interprets the data (*each listener software components includes code to be executed upon receiving an event notification, fig. 3, 304, 306, 318, 320, paragraph 0298 lines 19-22)*.

In regard to claim 9, Hardin et al. disclosed the process of claim 1, further comprising: interpreting the data by the reference model (*each listener software components includes code to be executed upon receiving an event notification, fig. 3, 304, 306, 318, 320, paragraph 0298 lines 19-22)*.

In regard to claim 10, Hardin et al. disclosed the process of claim 1, wherein the listener includes an event handler and the process further comprises:

generating a first data structure by the monitor in response to the occurrence of an interface event (*properties of hardware event object can be set and retrieved via setter and getter methods, fig. 6, 610, 612, 614, paragraph 0358 lines 5-7)*, and generating a private data structure for the reference model based on the first data structure and the event handler (*FIFO, fig. 6, 616, paragraph 0360 lines 1-4)*.

In regard to claim 11, Hardin et al. disclosed apparatus comprising:

a listener interface (*Listener software component, fig. 5, 512, 514)* for a monitor monitoring the occurrence of interface events (*Hardware event object, fig. 6, 604*) affecting a device (*change in state of the hardware device, fig. 6, 600, paragraph 0357 lines 9-12)*;

at least one listener (*Listener software component, fig. 5, 506, 508*) associated with a respective reference model (*Event Multicaster Object, fig. 5, 502*), each at least one listener being responsive to a

first data structure (*properties of hardware event object can be set and retrieved via setter and getter methods, fig. 6, 610, 612, 614, paragraph 0358 lines 5-7)* from the monitor (*event multicaster objects, fig. 3, 302)* for re-formatting the first data structure to a private data structure (*dispatch thread will service each interrupt event by forwarding it as a software event to each of the event's registered listeners, fig. 6, 618, paragraph 0362 lines 6-8)* for the respective reference model (*listener software components, fig. 3, 304, 306)*, the at least one listener having like inheritance to the listener interface (*when event is communicated through any of the structures it can be sent to the first registered listener software component and then to the next and so forth, paragraph 0301 lines 8-16)*; and

a listening post associated with the monitor having a pointer pointing to the at least one listener (*listener software component are reference to in the event multicaster object, fig. 3, 314, 316, paragraph 0298 lines 10-13)*.

In regard to claim 12, Hardin et al. disclosed the apparatus of claim 11, wherein the listening post has a plurality of pointers (*first storage location referencing one of event listener software components and second storage location, fig. 3, 314, 316)* associated with respective listeners in respective reference models (*listener software components, fig. 3, 304, 306)*, the monitor providing the first data structure to all of the listener entries (*properties of hardware event object can be set and retrieved via setter and getter methods, fig. 6, 610, 612, 614, paragraph 0358 lines 5-7)*, and an event handler associated with each listener (*event handler in listener software component, fig. 3, 318, 304)* and responsive to the first data structure (*properties of hardware event object can be set and retrieved via setter and getter methods, fig. 6, 610, 612, 614, paragraph 0358 lines 5-7)* provide the respective private data structure to the associated reference model (*listener software components, fig. 3, 304, 306)* concerning the interface event (*event notification for which listener software component has registered, paragraph 0298 lines 19-22)*.

In regard to claim 13, Hardin et al. disclosed the apparatus of claim 11, wherein the listening post further includes processes for registering and/or de-registering listeners (*addPossitiveListener and removePositiveListener functions, paragraph 0047 and 0059).*

In regard to claim 14, Hardin et al. disclosed a monitor and a reference model storing respective portions of a program for controlling the monitor to supply data to the reference model concerning an occurrence of an interface event affecting a device, the program comprising:

code for operating the monitor for the occurrence of an interface event (*each pin state change will be forwarded to hardware event object and placed into FIFO, fig. 6, paragraph 0362 lines 4-6)*;

code for maintaining a list of listeners accessible to the monitor (*event multicaster objects and two listener software components, fig. 3, 302, 304, 306, paragraph 0298)*; and

code for operating the monitor (*event multicaster objects, fig. 3, 302)* to respond to the occurrence of an interface event to supply data (*event notification, fig. 6, 620)* to the listeners on the list (*listener software components, fig. 3, 304, 306)* in response to the occurrence of the interface event (*hardware event client interface, fig. 6)* for use by the respective reference model (*hardware event object, fig. 6, 604)).*

In regard to claim 15, Hardin et al. disclosed the apparatus of claim 14, further comprising:

code for configuring the listener to like inherit a listener interface (*event can be sent by a single interface, paragraph 0295 lines 4)*,

code for causing the reference model to transmit a registration request to the monitor (*listener software components register to receive a particular event or events with the event multicaster objects, paragraph 0295)*, and

code for entering a pointer in the list in response to the request (*listener software components are reference to in the event multicaster object, fig. 3, 314, 316, paragraph 0298 lines 10-13).*

In regard to claim 16, Hardin et al. disclosed the apparatus of claim 15, further comprising:

code for causing the monitor to generate a first data structure in response to the occurrence of an interface event (*properties of hardware event object can be set and retrieved via setter and getter methods, fig. 6, 610, 612, 614, paragraph 0358 lines 5-7)*, and code for causing an event handler to generate the private data structure based on the first data structure (*FIFO, fig. 6, 616, paragraph 0360 lines 1-4).*

In regard to claim 17, Hardin et al. disclosed the apparatus of claim 14, further comprising:

code for causing the monitor to generate a first data structure in response to the occurrence of an interface event (*properties of hardware event object can be set and retrieved via setter and getter methods, fig. 6, 610, 612, 614, paragraph 0358 lines 5-7)*, and code for causing an event handler to generate the private data structure based on the first data structure (*FIFO, fig. 6, 616, paragraph 0360 lines 1-4).*

In regard to claim 18, Hardin et al. disclosed the apparatus of claim 14, wherein a plurality of monitors (*event multicaster objects, fig. 4, 404,402)* are operated for the occurrence of respective interface events, whereby each monitor (*event multicaster objects, fig. 4, 404,402)*is programmed to supply data to the reference model (*event listener component receive event notification for which it has registered, paragraph 0298 lines 19-22*) concerning the respective interface event in a structure defined by the respective monitor (*events, fig. 6, 620).*

In regard to claim 19, Hardin et al. disclosed the apparatus of claim 14, wherein a plurality of reference models are each configured to receive data (*event listener component receive event notification for which it has registered, paragraph 0298 lines 19-22*) from the monitor (*event multicaster objects, fig. 4, 404,402)*, whereby the monitor (*event multicaster objects, fig. 4, 404,402)* supplies data to the plurality of reference models (*listener software component, fig. 3, 304, 306)* concerning the interface event in a structure defined by the monitor (*events, fig. 6, 620)*.

In regard to claim 20, Hardin et al. disclosed the apparatus of claim 14, further comprising:

code for causing the reference model to interpret the data (*each listener software components includes code to be executed upon receiving an event notification, fig. 3, 304, 306, 318, 320, paragraph 0298 lines 19-22)*.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO 892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Loan Truong whose telephone number is (571) 272-2572. The examiner can normally be reached on M-F from 8am-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Scott Baderman can be reached on (571) 272-3644. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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